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Customer Number



Patent
Case No.: 55728US002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: **CORVELEYN, STEVEN G.**

Application No.: **10/009,353** Group Art Unit: **1711**

Filed: **November 13, 2001** Examiner: **Umakant K. Rajguru**

Title: **FLUOROELASTOMER COMPOSITION COMPRISING A
MINERAL OIL**

BRIEF ON APPEAL

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING
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Sep. 29, 2004 *Susan P. Gumatz*
Date Signed by: Susan P. Gumatz

Dear Sir:

This is an appeal from the Final Office Action mailed on January 27, 2004; finally rejecting claims 16, 17, and 19–21, in light of the Advisory Action mailed June 1, 2004. The Final Office Action incorporates by reference the rejection presented in Paragraph 5 of the Office Action mailed on March 18, 2003.

A Notice of Appeal in this application was mailed on July 26, 2004, and was received in the USPTO on July 29, 2004.

The fee required under 37 CFR § 41.20(b)(2) for filing an appeal brief should be charged to Deposit Account No. 13-3723.

Appellants request the opportunity for a personal appearance before the Board of Appeals to argue the issue of this appeal. The formal request and fee for the personal appearance will be timely paid after receipt of the Examiner's Answer or Supplemental Examiner's Answer.

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REAL PARTY IN INTEREST

The real party in interest is 3M Company (formerly known as Minnesota Mining and Manufacturing Company) of St. Paul, Minnesota and its affiliate 3M Innovative Properties Company of St. Paul, Minnesota.

RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

STATUS OF CLAIMS

Claims 16, 17, 19, 20 and 21 have been finally rejected and are the claims on appeal.

Claims 1-15 and 23-26 were withdrawn in response to a restriction requirement.

Claims 13, 18 and 22 were canceled.

STATUS OF AMENDMENTS

No amendments have been filed after the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention provides a fluoroelastomer composition comprising a fluoroelastomer blended with a mineral oil. The fluoroelastomer composition is free of vegetable wax or contains vegetable wax in an amount of less than 2 parts by weight per 100 parts by weight of fluoroelastomer. (see Application, page 3, lines 26-28; and claim 16.)

The benefits and advantages of some embodiments of the present invention include those set forth in the specification. For example, in some embodiments it has been found that a blend of a mineral oil and a fluoroelastomer improves the flow of the composition when that composition is being processed to form a desired shape which is subsequently cured (crosslinked) to form an article. In particular, it has been found that the throughput of the composition in extrusion, the speed of mold filling and the flow path length of the composition in injection molding, transfer molding and compression molding can be improved with this invention. When forming certain articles such as O-rings, a knit-line, which might be formed at the point where the composition flows meet, can generally be avoided. It has also been observed that articles produced from a fluoroelastomer composition that includes a fluoroelastomer blended with a mineral oil according to the invention generally have improved release from a mold after vulcanization, leading to decreased mold defects. (see Application, page 3, lines 3-13.)

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- I. Claims 16, 17, 19, 20 and 21 stand rejected under 35 U.S.C. §103(a) as purportedly being obvious over Dawes et al. (U.S. 4,485,062).

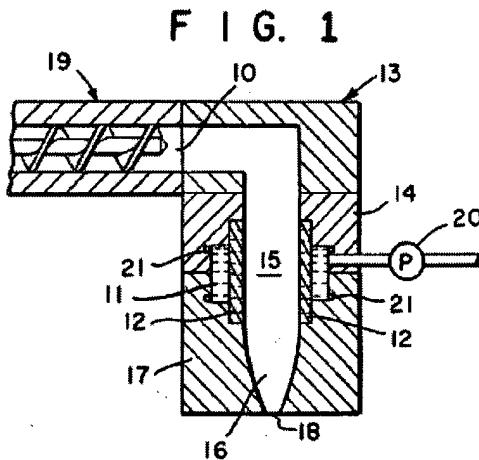
ARGUMENT

Background

Reference Cited

The sole reference asserted by the Patent Office in the present matter is United States Patent No. 4,485,062, issued to Dawes and Ryan on November 27, 1984 [hereinafter Dawes]. Illustrated below is Figure 1 from Dawes. Dawes describes a process for making polymeric extrudates by feeding a molten polymeric core (which may include a fluoroelastomer, column 4, lines 19–22) through die assembly 13. Column 2, lines 22–48. A low viscosity liquid (which may include mineral oil, column 5, line 16) is added to die cavity 15 through microporous structures 12. Column 2, lines 22–48. These microporous structures **must** be located upstream from narrowed flow passage 16 in order for the low viscosity liquid to sheath the polymeric core before entering narrow passage 16. Column 2, lines 42–48, Claim 1 (emphasis added).

Figure 1. Dawes, U.S. Patent No. 4,485,062



The low viscosity fluid of the Dawes process displaces the polymeric core from contacting the walls of the die. Column 2, lines 34–42. As indicated in Dawes: “The lower viscosity liquid displaces the molten polymeric core material from the wall of the microporous structure... and continues to flow in an outer concentric cylinder as the molten polymeric core material and low viscosity liquid form a sheath-core composite.” Column 2, line 67–Column 3,

line 4. Importantly, Dawes teaches: “The low viscosity liquid **does not become mixed** with the polymeric core material under processing conditions.” Column 4, lines 65–67 (emphasis added).

FINAL OFFICE ACTION REJECTION

The Patent Office rejection of claims 16, 17, 19, 20 and 21 indicated in the Final Office Action dated January 27, 2004 [hereinafter Final], asserts that it is “immaterial whether [the] fluoroelastomer and mineral [oil] are blended or simply brought in contact with each other as taught by [the] prior art. Additionally one of ordinary skill in the art will easily notice that Dawes uses mineral oil essentially as a lubricant. A lubricant is known to be admixed with a polymeric matrix and there are same numerous lubricants used in admixture with other ingredients of a composition. Hence, as stated in the earlier office action, the teachings of Dawes would have provided enough incentive to one to arrive at [the] instant invention.” Final, ¶6.

The Examiner has not made a “clear and particular” showing

Legal Standard

Every rejection in this case must fail because the Examiner has not made a clear and particular showing of a suggestion, teaching, or motivation to modify prior teachings to arrive at the present invention. *See, In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). An Examiner’s broad, conclusory statements regarding what is known in the prior art, standing alone, are not sufficient evidence of the requisite suggestion, teaching, or motivation to modify the prior art.

The Court of Appeals for the Federal Circuit (Federal Circuit) holds that the United States Patent and Trademark Office (Patent Office) may look to only three sources for motivation to modify prior art references in an obviousness rejection: (1) the nature of the problem to be solved, (2) the teachings of the prior art, and (3) the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1355–1356, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). The Patent Office must also clearly and particularly identify the source of such motivation. *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). Thus, regardless of

which source the Examiner relies upon, he must point to a particular disclosure for motivation to modify the prior art to arrive at the claimed invention. *Id.*

In *In re Zurko*, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001), the Board of Patent Appeals and Interferences (Board) was reversed in their rejection of Applicant's claims. In *Zurko*, the Examiner and later the Board relied on "basic knowledge" and "common sense" to one of ordinary skill in the art in making and sustaining an obviousness rejection. *In re Zurko*, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001). The Federal Circuit found such reliance unacceptable, stating that an obviousness rejection must be based upon evidence in the record. *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697. "[T]he Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of [its] findings." *Id.* As a result, the Federal Circuit held that it could not accept the Board's unsupported assessment of the prior art. *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1698.

In *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002), the Federal Circuit reiterated the requirement that the motivation to modify a prior art reference (or to combine prior art references), cannot come from the Patent Office's subjective belief or from some unknown authority. The Patent Office in *Lee* took the position that it did not need "any specific hint or suggestion in a particular reference to support" modification of a prior art reference. *In re Lee*, 277 F.3d 1338, 1341, 61 USPQ2d 1430, 1432 (Fed. Cir. 2002). The Federal Circuit found such a rejection to be inappropriate. A rejection based on a fact asserted by the Patent Office without citing to a particular reference in support of that fact is "legal error and arbitrary agency action." *Lee* 277 F.3d at 1344, 61 USPQ2d at 1432.

Analysis

The parent independent claim pending on appeal, claim 16, provides:

16. Fluoroelastomer composition comprising a fluoroelastomer *blended with* a mineral oil, said composition being free of vegetable wax or containing vegetable wax in an amount of less than 2 parts by weight per 100 parts by weight of

fluoroelastomer, optionally wherein at least part of said mineral oil is adsorbed on a carrier, and optionally wherein said composition further comprises a vulcanization system (emphasis added).

The obviousness rejection in the Final stands upon the unsupported assertion that a “lubricant is known to be admixed with a polymeric matrix.” Final ¶6.

The Examiner’s broad, conclusory statements regarding what is known in the prior art, standing alone, are not sufficient evidence of the requisite suggestion, teaching, or motivation to modify of the prior art to arrive at the claimed invention. Just like in *Zurko*, the Patent Office here relies on “basic knowledge” in order to advance the obviousness rejection. The Patent Office makes the unsupported assertion that it is known to admix lubricants with a polymeric matrix without citing a particular reference in support. The long-established requirement of a clear and particular showing of a suggestion to modify the prior art, a showing that is conspicuously absent in this case, mandates that the Examiner’s rejection be reversed.

The holding in *Lee* also compels reversal of the Examiner’s rejection. In the present rejection, the Patent Office does not rely on any particular hint or suggestion in any particular reference to support the modification of Dawes. Instead, the Patent Office bases its rejection upon an unsupported assertion of what is known in the art. As noted in *Dembiczak* and reiterated in *Lee*, such a conclusory rejection lacks sufficient evidence of a suggestion, teaching, or motivation to modify of the prior art. Under the standards set by the Federal Circuit, the Examiner’s rejection in this case is “clear legal error and arbitrary agency action” and should be reversed. *Cf., In re Lee*, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1432 (Fed. Cir. 2002).

Dawes teaches away

Even if, *arguendo*, the Board were to accept the Patent Office assertion that a lubricant is known to be admixed with a polymeric matrix, the Examiner’s rejection should still be reversed. The assertion made by the Patent Office is that lubricants are generally known to be admixed with polymeric matrixes. Even if the Patent Office were equipped with such an asserted teaching, Dawes teaches away from modifying its description to arrive at the present invention.

Legal Standard

In a long line of cases, the Court of Customs and Patent Appeals and the Federal Circuit have held that prior art that teaches away from what is claimed militates against a finding of obviousness. *See, e.g., Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 43 USPQ2d 1294 (Fed. Cir. 1997); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983).

In *Arkie Lures*, the claims at issue were directed to plastic lures with salt incorporated into the plastisol used to make the plastic lures. *Arkie Lures*, 119 F.3d 953, 954, 43 USPQ2d 1294, 1295. The prior art indicated the desirability of salty fishing lures and the desirability of plastic fishing lures. *Arkie Lures*, 119 F.3d at 955, 43 USPQ2d at 1295. It was suspected in the prior art, however, that manufacturing salt-impregnated plastic lures was unfeasible and possibly unsafe. *Id.* The Federal Circuit therefore held that even though it was known to soak a formed plastic lure in a salty brine so as to impart a salty taste, the prior art failed to provide a suggestion as to the desirability or means for incorporating salt **into** the plastisol used to make the salty plastic lures. *Arkie Lures*, 119 F.3d at 959, 43 USPQ2d at 1297–98. Thus, in one aspect, *Arkie Lures* establishes that a prior art reference relating to a composition comprising a first component and a second component forming a coating over the first component does not render obvious a composition comprising a first component and a second component incorporated into (blended with) a second component. This is particularly true when the prior art indicates that such incorporation is unfeasible or unsafe.

Analysis

Dawes indicates that the low viscosity liquid does not become mixed with the polymeric core material under the disclosed processing conditions. Column 4, lines 65–67. As in *Arkie Lures*, Dawes teaches only how to treat a pre-formed polymeric core with a surface coating (in this case, mineral oil). There is no teaching, suggestion, or disclosure that a mineral oil lubricant can be or should be blended with a fluoroelastomer. As the Federal Circuit held in *Arkie Lures*, prior art teachings relating to treating the surface of formed first components with second components does not render obvious a composition in which the first and second components are

blended with one another, particularly when the prior art teaches that such a blending is unfeasible.

The only teaching of record in this case regarding the blending of mineral oils and fluoroelastomers comes from the Applicant. Application, page 4, lines 20–23. Specifically, the Applicant has indicated that it is well known that mineral oils are incompatible with fluoroelastomers. *Id.* (*citing* “Modern Fluoropolymers”, Edited by John Scheirs, 1997, John Wiley & Sons Ltd., Chapters 5 and 32). For this reason, mineral oils have been **avoided** in fluoroelastomer extrusion because, for example, they could disrupt the mixing process by which the fluoroelastomer is blended with other components. *Id.* Significantly, the Patent Office has failed to present any particular teaching in the prior art to the contrary.

Similar to the situation in *Arkie Lures*, not only does Dawes fail to indicate that mineral oil may be blended with a fluoroelastomer, the only art of record teaches away from the claimed invention by expressly disavowing the possibility of mixing mineral oils with fluoroelastomers. The obviousness rejection must be reversed because the modification of Dawes proposed by the Patent Office is contrary to the teachings of the prior art.

Further illustrating how Dawes teaches away from the present invention, it is significant that the process of Dawes requires a very particular apparatus in order to carry out the process described therein. See Figure 1 from Dawes, reproduced above. Specifically, Dawes requires that the microporous structures in the die assembly be upstream from the narrowed flow passage, in order that the low viscosity liquid can adequately coat the polymeric core. Column 2, lines 42-48, Claim 1.

One of ordinary skill in the art, in possession of Dawes, would be taught that it is necessary to construct a complicated extrusion die with microporous structures located at very specific locations and capable of delivering specifically defined low viscosity fluids at carefully controlled pressures to form a required sheath around a polymeric core being extruded. There is no indication in Dawes that it might be possible to solve several problems of fluoroelastomer extrusion by forming a composition comprising a blend of fluoroelastomer and mineral oil, as described in claims 16, 17, 19, 20 and 21 of the present invention.

The present invention allows for improved extrusion of fluoroelastomer compositions through conventional, readily available extrusion dies. The present invention is not only unobvious over the description in Dawes, but the present invention does not need the complex and expensive die construction described and required in Dawes to coat a surface. Rather, the invention requires blending. This change alone is sufficient to warrant reversal of the rejections, for where the Patent Office proposes a modification of the prior art that would change the principle of operation of the prior art invention being modified, the teaching of the reference is not sufficient to render claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959).

The rejection is an inappropriate “obvious to try” rejection

Additionally, even if, *arguendo*, the Board were to accept the Patent Office assertion that a lubricant is known to be admixed with a polymeric matrix, the Examiner’s rejection should be reversed upon the further ground that the rejection amounts to an “obvious to try” rejection. While not specifically using the phrase “obvious to try,” the Patent Office asserts that it is known that “a lubricant” may be admixed with “a polymeric matrix.” Final at ¶ 6. This assertion does not provide any guidance to one of ordinary skill in the art as to how, or which lubricants may be admixed with which polymeric matrixes. This is a fatal flaw in the Examiner’s rejection.

Legal Standard

The Federal Circuit has identified two kinds of error with respect to obvious to try rejections. First is where the Patent Office asserts that it would be obvious to try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gives either no indication of which parameters are critical or no direction as to which of many possible choices is likely to be successful. *In re O’Farrell*, 853 F.2d 894, 903 7 USPQ2d 1673, 1681 (Fed. Cir. 1988). The second is where the Patent Office relies upon a general approach that seems promising in a field of experimentation, where the prior art gives only general guidance as to the particular form of the claimed invention or how to achieve it. *Id.*

Analysis

The present rejection must fail because it does not identify any prior art teachings as to which of numerous possible choices of lubricants or polymer matrixes would combine to give beneficial extrusion results. The Patent Office has failed to identify any teachings that indicate which properties of lubricants and which properties of polymer matrixes are critical to give successful extrusion results.

Armed with the teachings of Dawes and the Examiner's unsupported, hypothetical, "common knowledge," one of ordinary skill in the art would be left afloat in the middle of an ocean of possible combinations, without a map or a compass. Yet it is the position of the Patent Office, in the present rejection, that such a lost soul would proceed directly and obviously from the generic lubricants and polymers of the rejection to the particular mineral oil and fluoroelastomers of the present invention, despite the prior art teachings that the two cannot be blended and despite Dawes description of lubricating a surface while not blending. The rejection fails to point to any specific guidance as to how one might arrive so directly at the present invention or provide any expectation of success. This does not comport with the rigorous legal standards imposed on the Patent Office in asserting an obviousness rejection. The Patent Office has failed to identify any particular guidance as to how one might begin to narrow the myriad of combinations of lubricants and polymers to arrive at a successful working example. Accordingly, the Examiner's rejection of the claimed invention as obvious to try must be reversed.

Additionally, the Examiner's rejection should be reversed because it is based solely on asserted general guidance as to the particular form of the claimed invention with no guidance as to how to achieve it. The present rejection asserts that the hypothetical knowledge that "a lubricant" can be admixed with "a polymeric matrix" somehow renders obvious any blending of particular lubricants with particular polymeric matrixes. The present rejection identifies no guidance as to the conditions under which such admixing must be performed, e.g., temperature, shear, solids content, etc., or as to the composition required, e.g., additives, synergists, proportions of components, etc. The Federal Circuit in *O'Farrell* has indicated that such an obviousness rejection, based on an asserted "general approach" to solving a problem, is inappropriate. Just as in *O'Farrell*, the present rejection rests upon a general approach without

guidance as to how to achieve the specific results of the present invention. As such, the Examiner's rejection must be reversed.

Summary

In sum, the present rejection of claims 16, 17, 19, 20 and 21 must be reversed for at least three reasons. First, the rejection fails to make a clear and particular showing of all of the elements of the present invention in the prior art. Furthermore, both Dawes and *Modern Fluoropolymers*, Chapters 5 and 32, teach away from the present invention. Indeed, the present invention involves no need for the process or equipment described in Dawes. Finally, even if one were to accept the Patent Office's unsupported assertions of what is common knowledge to one of ordinary skill in the art, the rejection amounts to an improper assertion that the present invention would be obvious to try. Any of these three bases, standing alone, is sufficient to reverse the Examiner's rejection. In combination, it is believed imperative that the Board should reverse.

ADVISORY ACTION REJECTION

In reply to the Applicant's response after final filed under 37 CFR § 1.116, the Patent Office took a new approach to the obviousness rejection. In the Advisory Action dated June 1, 2004, the Patent Office raised, for the first time, the argument that the phrase "blended with", in claim 16, is a process limitation. According to the Advisory Action: "Determination of patentability in "product-by-process" claims is based on [the] product itself even though such claims are limited and defined by [a] process and thus the product in such claim/s is unpatentable if it is [the] same or obvious from the product of [the] prior art even if [the] prior art [product] was made by a different process."

"Blended with" describes a structural relationship, not a product-by-process

The rejection recited in the Advisory Action must be reversed because the assertion by the Patent Office that the claims in question are "product-by-process" claims is incorrect as a matter of law.

Legal Standard

The use of the term “blended” does not transform a claim into a product-by-process claim. The term blended describes only the structural relationship between components. The intransitive form of blend means to form a mixture. *The American Heritage College Dictionary*, Third Edition 148 (2000) (copy enclosed). Thus, the adjective form “blended with” describes a structural characteristic, i.e., components related as being in a mixture. It is well established claim construction that certain apparent process words in claims are interpreted as structural limitations when they are used in an adjective non-process sense and adequately define a physical characteristic of the product. 3 Donald S. Chisum, *Chisum on Patents* § 8.05, at 8-172 to 8-174 (2002) (copy enclosed). “For example, the word ‘frozen,’ though descriptive of the process freezing, definitely describes an objective characteristic observable by inspection of the product. The courts have held a variety of such words not to be process limitations; typical are: ‘intermixed’ as descriptive of a composition of matter, ‘ground in place’ as descriptive of the manner in which spark plug porcelain is fitted into its shell, and ‘pressfitted’ as descriptive of a sheet metal structure.” *Id.* (internal citation omitted).

Where words of limitation can connote with equal force a structural characteristic of a product or a process of manufacture, such words are commonly and **by default** interpreted in their structural sense, unless the patentee has demonstrated otherwise. *3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371, 69 USPQ2d 1050, 1055 (Fed. Cir. 2003) (internal citation omitted). For instance, the term “chemically engraved” has been held to be a structural, not a process term. *Vanguard Prods. Co. v. Parker Hannifin Corp.*, 234 F.3d 1370, 1373, 57 USPQ2d 1087, 1090 (Fed. Cir. 2000).

In *Newell Window Furnishing Inc. v. Springs Window Fashions Division Inc.*, 53 USPQ2d 1302 (N.D. Ill. 1999), the term in issue was “folded.” The claim was to ‘[A] strip of shade material folded lengthwise to form an upper cell wall and a lower cell wall extending from a fold...’ *Newell Window*, 53 USPQ2d at 1318. The court noted that the patent owners “characterize the italicized language as a structural definition rather than a process limitation and contend that the claims extend to any cell described in the claims, regardless of the method of manufacture.” The accused infringer would read ‘folded’ as a past participle, requiring at some

state of manufacture a strip of shade material be folded to create one free edge and one folded edge. *Id.* The court stated that, read in context, the accused infringer's reading would place an anomalous process limitation among unambiguous product claims. *Id.* This reading strains the language of the claim well beyond its most natural reading. Therefore, the court held that the proper interpretation of folded was as an adjective, describing the structure of the claimed article, not the process by which it was made. *Id.*

Analysis

The term "blended with" in the present invention refers to a structural relationship between the fluoroelastomer and the mineral oil. In particular, "blended with" indicates that the components are related as being in a mixture.

The Patent Office asserts that "blended with" is a process limitation. *See, Advisory Action.* This interpretation is completely out of step with claim construction law.

As in *Newell Window*, the term "blended with," used in claim 16, is clearly a structural limitation placed in an unambiguous product claim. The reading advanced by the Patent Office, much like the reading advanced by the accused infringer in *Newell Window*, would place an anomalous process limitation into the product claims under consideration.

The Applicant has clearly and consistently indicated that the invention as described in claims 16, 17, 19, 20 and 21 requires a structural relationship between the mineral oil and the fluoroelastomer. The application indicates that, before this invention, mineral oils were avoided because they could disrupt the mixing of fluoroelastomers with other components. Application, page 4, lines 20–23. Despite the admonitions against such blends, the present inventor has found that mineral oil can in fact be blended with fluoroelastomers. *Id.*, lines 23-25. A number of methods have been disclosed to effect this mixing, including a slow mixing process (*id.*, lines 24–25) and by adsorbing the mineral oil on a carrier prior to mixing with the fluoroelastomer (*id.*, lines 25–27). Thus, it is clear from the application that the underlying invention does not require a precise process, but by a structural relationship of the components. When the Applicant has consistently relied upon the structural sense of a term, it is inappropriate

to confine the claim to a product-by-process claim. *Cf., 3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1374, 69 USPQ2d 1050, 1057 (Fed. Cir. 2003).

In the amendment and response filed under 37 CFR § 1.111, filed September 17, 2003 [hereinafter First Response], the Applicant clearly relied on the structural nature of the term “blended with.” The Patent Office asserted that Dawes describes mineral oils incorporated into the polymers. *See*, First Response, page 9. The Applicant traversed the Patent Office characterization of Dawes. Particularly, the Applicant differentiated Dawes from the present invention by indicating that Dawes “describes a sheath of low viscosity liquid on a molten polymeric core material.” First Response, page 9. Thus, the Applicant clearly described the structural difference between Dawes and the present invention to show that the obviousness rejection was unwarranted.

Furthermore, in the response filed under 37 CFR § 1.116, filed March 29, 2004 [hereinafter Final Response], the Applicant directed the Patent Office to the fact that Dawes teaches mineral oil is present in a sheath around a polymeric core. Final Response, page 7. In differentiating the present invention and Dawes, the Applicant suggested that Dawes teaches that the low viscosity liquid does not become mixed with the polymeric core material under the processing conditions. *Id.* Once again, this indicates the Applicant’s requirement of the structural difference between Dawes and the invention as described in claims 16, 17, 19, 20 and 21, *viz*, the difference between being blended with and forming a sheath around.

Throughout the prosecution of the present application, the Applicant has consistently used the structural sense of the term “blended with.” It is therefore inappropriate to categorize the claim as a product-by-process claim. *Accord, 3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1374, 69 USPQ2d 1050, 1057 (Fed. Cir. 2003). The Examiner’s rejection recited in the Advisory Action must be reversed because the assertion by the Patent Office that the claims in question are “product-by-process” claims is incorrect as a matter of law.

The Patent Office Has Not Shown Dawes to be Structurally Similar to the Present Invention

Even if, *arguendo*, the Board were to accept the faulty product-by-process construction, the invention as described in claims 16, 17, 19, 20 and 21 is still patentable over Dawes.

Legal Standard

When considering a product-by-process claim, the structure implied by the process steps should be considered when assessing patentability. Where the manufacturing or process steps would be expected to impart distinctive structural characteristics to the final product, it is the patentability of the final product that must be judged against the prior art. *See, e.g., In re Garnero*, 412 F.2d 276, 278, 162 USPQ 221, 223 (CCPA 1979); MPEP § 2113.

Analysis

In the present application, the Patent Office has failed to show that the claimed product appears to be the same or similar to that of the prior art. *Compare, In re Marosi*, 710 F.2d 798, 803, 218 USPQ 289, 292 (Fed. Cir. 1983). In fact, the Patent Office has admitted that the present invention is structurally distinct from the prior art. In the Final Office Action, the Patent Office stated “*it is immaterial* whether [the] fluoroelastomer and mineral [oil] are blended **or** simply brought into contact with each other as taught by the prior art.” Final at ¶6. This is a clear indication that the Patent Office recognizes that components that are blended are inherently and structurally different than those that are brought together in a core-sheath manner, as described in Dawes. In fact, to try to bridge the distinctions between the prior art and the present invention, the Patent Office rests upon an unsupported assertion related to admixing generic lubricants with generic polymers. This is an unambiguous indication that the Patent Office itself recognizes that there are differences between the structure of the present invention and that of the prior art.

The statement of the Patent Office, quoted above, is deficient in another respect. Particularly, the Patent Office asserts that the differences between the structure of the claimed invention and the prior art are “*immaterial*.” To the contrary, the differences between the prior art and the claimed invention are particularly material. It is the structure implied by the process steps that should be considered when assessing patentability. *Garnero*, 412 F.2d 276, 278, 162 USPQ 221, 223 (CCPA 1979); MPEP § 2113.

The fact that structural differences *are* in fact material to patentability belies the Examiner’s rejection. Once structural distinctions are recognized between the product of the process described in Dawes and the composition of the present invention, the arguments with

respect to the rejection in the Final Office Action (discussed above and incorporated herein by reference) compel a finding that the invention described in claims 16, 17, and 19–21 are patentable over Dawes. Accordingly, the rejection of these claims is unwarranted and should be reversed.

Even if we were to accept the faulty product-by-process construction posited by the Patent Office, the rejection of claims 16, 17, 19, 20 and 21 as obvious over Dawes must fail because the product described in those claims is structurally distinct and non-obvious over the product described in Dawes. By failing to demonstrate where the prior art teaches or suggests each and every element of the claimed invention, the Patent Office has failed to meet its threshold burden in establishing a *prima facie* case for obviousness. See MPEP 2143.

Accordingly, the Examiner’s rejection, as articulated in the Advisory Action, must be reversed.

Summary

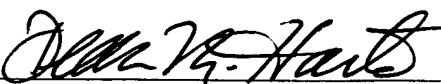
In sum, the Examiner’s rejection, in the Advisory Action, of claims 16, 17, 19, 20 and 21 as obvious over Dawes must fail because it improperly limits claim 16 to a product-by-process claim. Alternatively, even if, *arguendo*, we were to accept this faulty claim construction, the rejection should be reversed because the Patent Office has not met its burden of establishing the obviousness of the structurally distinct composition of the present invention.

CONCLUSION

For the foregoing reasons, appellants respectfully submit that the Patent Office has erred in rejecting this application under 35 USC § 103(a). Please reverse the Patent Office on all counts.

Respectfully submitted,

29 Sept 2003
Date

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CLAIMS APPENDIX

1. (Withdrawn) Use of a mineral oil in a fluoroelastomer composition comprising a fluoroelastomer to improve the flow of said composition during processing to form an article therefrom and/or to improve the release from a mold of a vulcanized article produced from said fluoroelastomer composition.
2. (Withdrawn) Use according to claim 1 wherein said mineral oil is present in said fluoroelastomer composition in an amount of 0.25 to 15 parts by weight for 100 parts by weight of fluoroelastomer.
3. (Withdrawn) Use according to claim 1 wherein said mineral oil is at least partially adsorbed on a carrier.
4. (Withdrawn) Use according to claim 3 wherein said carrier comprises particles capable of adsorbing said mineral oil.
5. (Withdrawn) Use according to claim 4 wherein said particles are selected from the group consisting of carbon black and inorganic particles.
6. (Withdrawn) Use according to any of the previous claims wherein said fluoroelastomer composition further comprises a wax.
7. (Withdrawn) Use according to claim 6 wherein said wax is a vegetable wax and is contained in said fluoroelastomer composition in an amount of less than 2 parts by weight per 100 parts by weight of fluoroelastomer.
8. (Withdrawn) Method of making a fluoroelastomer article comprising the steps of blending a fluoroelastomer with a mineral oil and, optionally, a wax to provide a fluoroelastomer composition and processing said composition to form said

fluoroelastomer article by means of a processing technique selected from the group consisting of extrusion, injection molding, transfer molding, compression molding and combinations thereof.

9. (Withdrawn) Method according to claim 8 wherein said mineral oil is present in said fluoroelastomer composition in an amount of 0.25 to 15 part by weight for 100 parts by weight of fluoroelastomer.
10. (Withdrawn) Method according to claim 8 wherein said mineral oil is at least partially adsorbed on a carrier.
11. (Withdrawn) Method according to claim 10 wherein said carrier comprises particles capable of adsorbing said mineral oil.
12. (Withdrawn) Method according to claim 11 wherein said particles are selected from the group consisting of carbon black and inorganic particles.
13. (Canceled)
14. (Withdrawn) Method according to claim 8 wherein said wax is a vegetable wax and is contained in said fluoroelastomer composition in an amount of less than 2 parts by weight per 100 parts by weight of fluoroelastomer.
15. (Withdrawn) Method according to any of claims 8 to 14 wherein said fluoroelastomer composition comprises a vulcanization system and wherein said method includes the step of vulcanization.

16. (Previously Presented) Fluoroelastomer composition comprising a fluoroelastomer blended with a mineral oil, said composition being free of vegetable wax or containing vegetable wax in an amount of less than 2 parts by weight per 100 parts by weight of fluoroelastomer, optionally wherein at least part of said mineral oil is adsorbed on a carrier, and optionally wherein said composition further comprises a vulcanization system.
17. (Original) Fluoroelastomer composition according to claim 16 wherein said fluoroelastomer composition is free of any wax or contains a total amount of vegetable and non-vegetable wax of less than 2 parts by weight per 100 parts by weight of fluoroelastomer.
18. (Canceled)
19. (Previously Presented) Fluoroelastomer composition according to claim 16 or 17 wherein said carrier comprises particles capable of adsorbing said mineral oil.
20. (Original) Fluoroelastomer composition according to claim 19 wherein said particles are selected from the group consisting of carbon black and inorganic particles.
21. (Previously Presented) Fluoroelastomer composition according to claim 16 or 17 wherein said mineral oil is comprised in the fluoroelastomer composition in an amount of 0.25 to 15 parts by weight for 100 parts by weight of fluoroelastomer.
22. (Canceled)
23. (Withdrawn) Method of making a fluoroelastomer composition having improved flow characteristics when processed, said method comprising the steps of blending together a mineral oil and a fluoroelastomer to obtain a fluoroelastomer composition that is free of

vegetable wax or alternatively to blend together a mineral oil, a fluoroelastomer and a vegetable wax to obtain a fluoroelastomer composition that contains a vegetable wax in an amount of less than 2 parts by weight for 100 parts by weight of fluoroelastomer.

24. (Withdrawn) Method according to claim 23 wherein said mineral oil is adsorbed on a carrier when blended with said fluoroelastomer.
25. (Withdrawn) Method according to claim 24 wherein said carrier comprises particles capable of adsorbing said mineral oil.
26. (Withdrawn) Method according to claim 25 wherein said particles are selected from the group consisting of carbon black and inorganic particles.

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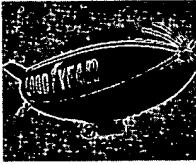
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bleeding heart

blimp
The Goodyear blimp
Spirit of Akron

ings. b. A coat of arms. 2. An ostentatious display.
bld. abbr. 1. Blood. 2. Print. Boldface.

bldg. abbr. Building.

bldr. abbr. Builder.

bleach (bléch) v. bleached, bleach·ing, bleach·es. — tr. 1. To remove the color from, as by means of chemical agents or sunlight. 2. To make white or colorless. — intr. To become white or colorless. — n. 1. A chemical agent used for bleaching. 2.a. The act of bleaching. b. The degree of bleaching obtained. [ME *blechen* < OE *blæcan*. See *bhel**.]

bleach·er (bléch'är) n. 1. One that bleaches or is used in bleaching. 2. An often unroofed outdoor grandstand for seating spectators. Often used in the plural.

bleach·ing powder (bléch'ing) n. A powder containing calcium chloride and calcium hypochlorite, used as a bleach.

bleak¹ (blék) adj. bleak·er, bleak·est. 1.a. Gloomy and somber; dreary. b. Providing no encouragement; depressing. 2. Cold and cutting; raw. 3. Exposed to the elements; unsheltered and barren. [ME *bleik*, pale < ON *bleikr*, white. See *bhel**.] — bleak·ly adv. — bleak·ness n.

bleak² (blék) n., pl. bleak or bleaks. A small European freshwater fish of the genus *Alburnus*, having silvery scales used in making artificial pearls. [ME *bleke*, prob. alteration (influenced by *bleke*, pale; see *bleak*¹) of **blay* < OE *blægē*.]

blear (blér) tr.v. bleared, blear·ing, blears. 1. To blur or reddened (the eyes). 2. To blur; dim. — adj. Bleary. [ME *bleren*.]

blear·y (blér'ë) adj. -l·er, -l·est. 1. Blurred or dimmed by or as if by tears: bleary eyes. 2. Vaguely outlined; indistinct.

3. Exhausted; worn-out. — bleak·l·y adv. — bleak·l·ness n. — bleak·y-eyed (blér'ë-íd') also bleak-eyed (blér'ë-íd') adj. With eyes blurred or reddened, as from lack of sleep.

bleat (blét) n. 1.a. The cry of a goat or sheep. b. A sound like this. 2. A whining complaint. — v. bleat·ed, bleat·ing, bleats. — intr. 1. To utter the cry of a goat or sheep. 2. To utter a sound like this. — tr. To utter in a whining way. [ME *blet* < *bleten*, to bleat < OE *blætan*.] — bleak·er n.

bleb (bléb) n. 1. A small blister or pustule. 2. An air bubble. [Prob. alteration of *blow*.] — bleak·by adj.

bleed (bléd) v. bled (bléd), bleed·ing, bleeds. — intr. 1. To emit or lose blood. 2. To be wounded, esp. in battle. 3. To feel sympathetic grief or anguish. 4. To exude a fluid such as sap. 5. To pay out money, esp. an exorbitant amount. 6.a. To run together or be diffused, as dyes in wet cloth. b. To undergo or be subject to such a diffusion of color. 7. To show through a layer of paint. 8. To be printed so as to go off the edge or edges of a page after trimming. — tr. 1.a. To take or remove blood from. b. To extract sap or juice from. 2.a. To draw liquid or gaseous contents from; drain. b. To draw off (liquid or gaseous matter) from a container. 3. To obtain money from, esp. by improper means. 4.a. To cause (an illustration, for example) to bleed. b. To trim (a page, for example) so as to mutilate the printed matter. — n. 1. Illustrative matter that bleeds. 2.a. A page trimmed so as to bleed. b. The part of the page that is trimmed off. [ME *bleden* < OE *blédan* < *blōd*, blood. See *bhel**.]

bleed·er (blé'där) n. 1. A person, such as a hemophiliac, who bleeds freely or is subject to hemorrhages. 2. A person who draws blood from another; a phlebotomist.

bleed·ing heart (blé'ding) n. 1. Any of various perennial herbs of the genus *Dicentra*, esp. *D. spectabilis*, having clusters of pink or red heart-shaped flowers. 2. A person who is considered excessively sympathetic toward those who claim to be underprivileged. — bleed·ing-heart' (-här't) adj.

bleep (blép) n. A brief high-pitched sound, as from an electronic device. — v. bleeped, bleep·ing, bleeps. — intr. To emit a bleep or bleeps. — tr. To edit out (spoken material) from a broadcast or recording, esp. by replacing with a bleep. [Imit.] — bleep·er n.

blem·ish (blém'ish) tr.v. -ished, -ish·ing, -ish·es. To mar or impair by a flaw. — n. An imperfection that mars or impairs. [ME *blemisshen* < OFr. *blesmir*, *blemir*, *blemiss-*, to make pale, of Gmc. orig. See *bhel**.] — blem'ish·er n.

blench¹ (bléñch) intr.v. blenched, blench·ing, blench·es. To draw back or shy away, as from fear; flinch. [ME *blenchen* < OE *blencan*, to deceive. See *bhel**.] — blench'er n.

blench² (bléñch) v. Var. of blanch.

blend (blénd) v. blend·ed or blent (bléñt), blend·ing, blends. — tr. 1. To combine or mix so that the constituent parts are indistinguishable from one another. 2. To combine (varieties or grades) to obtain a mixture of a particular character or consistency. — intr. 1. To form a uniform mixture; intermingle. 2. To become merged into one; unite. 3. To create a harmonious effect or result: *The tie blended with the jacket*. — n. 1.a. The act of blending. b. Something, such as an effect or a product, that is created by blending: a blend of coffees. See Syns at mixture. 2. Ling. A word produced by combining parts of other words, as *smog* from *smoke* and *fog*. [ME *blenden*, prob. < ON *blanda*, blend. See *bhel**.]

blende (blénd) n. 1. Any of various shiny minerals composed chiefly of metallic sulfides. 2. See sphalerite. [Ger. < *blenden*, to deceive (because it resembles lead ore) < MHG. *blenden* < OHG. *blentan*, to blind, deceive. See *bhel**.]

blend·ed whiskey (bléñd'did) n. Whiskey that is a blend of straight whiskies or of whiskey and neutral spirits.

blend·er (bléñd'är) n. One that blends, esp. an appliance with blades for chopping, mixing, or liquefying foods.

blend·ing inheritance (bléñd'ing) n. Genet. The inheritance pattern in which the inherited characters in the offspring are intermediate between those of the parents.

blend·y (bléñd'ë) n., pl. -nies. Any of several chiefly marine fishes that are primarily of the families *Blenniidae* and *Ophididae* and have small elongated bodies. [Lat. *blennius*, a kind of sea fish < Gk. *blennos*, slime, blenny. See *mel**.]

bleph·a·ri·tis (bléf'är-i-tis) n. Inflammation of the eyelid. blepharo- or blephar- pref. 1. Eyelid; eyelids: *blepharo-* spasm. 2. Cilium; flagellum: *blepharoplast*. [Gk. < *blepharon*, eyelid.]

bleph·a·ro·plast (bléf'är-ä-plás't) n. A basal body in ciliated flagellated protozoans that consists of a minute mass of chitin embedded in the cytoplasm at the base of the flagellum.

bleph·a·ro·plas·ty (bléf'är-ä-plás'té) n. Plastic surgery of the eyelids.

bleph·a·ro·spasm (bléf'är-ö-spáz'äm) n. Spasmodic winking caused by involuntary contraction of an eyelid muscle.

Blé·rot (blá'rë-ô, blá-rö'), Louis. 1872-1936. French aviator and aviator who was the first to cross the English Channel by airplane (1909).

bles·bok (bléb'bök') n., pl. blesbok or -boks. A South African antelope (*Damaliscus albifrons*) having curved horns and a large white mark on its face. [Afr.: *bles*, white mark on an animal's face (< MDv.; see *bhel**.) + *bok*, buck (< MDv. *bok*).]

bles (bléz) tr.v. blessed or blest (blést), bles·ing. bles·ed. — 1. To make holy by religious rite; sanctify. 2. To make the sign of the cross over so as to sanctify. 3. To invoke divine favor upon. 4. To honor as holy; glorify. 5. To confer well-being on. 6. To endow, as with talent. [ME *blessen* < OE *bléasan*, to consecrate. See *bhel**.] — bles·er n.

bles·ed (bléz'id) also blest (blést) adj. 1.a. Worthy of worship. b. Held in veneration; revered. 2. Blessed. Rom. Cath. Ch. Used as a title before the name of one who has been beatified. 3. Bringing happiness, pleasure, or contentment. 4. blessed. Used as an intensive: *I don't have a blessed dime* [Sense 4, alteration of *BLASTED*.] — bles·ed·ly adv. — bles·ed·ness n.

Blessed Sacrament n. Rom. Cath. Ch. The consecrated host.

Blessed Virgin Mary n. The Virgin Mary.

bles·sing (bléz'ing) n. 1. The act of one that blesses. 2. A short prayer said before or after a meal. 3. Something promoting or contributing to happiness, well-being, or prosperity; a boon. 4. Approbation; approval.

bleth·er (bléth'är) v. & n. Var. of blather.

bleu cheese (blóo) n. See blue cheese. [Fr. *bleu* < OFr. *bleu*.]

bleue (blóo) n. P.t. of *blest* (blést), bles·ing. bles·ed.

blew¹ (blóo) v. P.t. of *blow*¹.

blew² (blóo) v. P.t. of *blow*³.

Bli·da (blí'dä) n. A town of N Algeria at the foot of the Adrar Mts. SW of Algiers. Pop. 136,033.

Bligh (blí), William. 1754-1817. British naval officer who was captain of the H.M.S. *Bounty* was set adrift by his mutinous crew during a voyage to Tahiti (1789).

blight (blít) n. 1.a. Any of numerous plant diseases resulting in sudden conspicuous wilting and dying of affected parts. b. The causative agent, such as a fungus, that results in blight. 2. An adverse environmental condition, such as air pollution.

3. Something that frustrates hope or impedes progress or prosperity. — v. blight·ed, blight·ing, blights. — tr. 1. To cause (a plant, for example) to undergo blight. 2. To have deleterious effect on; ruin. — intr. To suffer blight. [?]

blight·er (blít'är) n. Chiefly British. A fellow, esp. one held in low esteem.

blimp (blímp) n. A nonrigid, buoyant airship. [Perh. < *blimp* (blímp) n. Chiefly British. A pompous ultranationalistic reactionary. [After Colonel *Blimp*, a cartoon character invented by David Low (1891-1963).] — Blimp·ish adj.

blind (blínd) adj. blind·er, blind·est. 1.a. Unable to see; sightless. b. Of, relating to, or for sightless persons. 2.a. Performed or made without information that might prejudice the result. b. A blind stab at the question. c. Performed solely by instruments: *blind navigation*. 3. Unable or unwilling to perceive or understand; *blind to her faults*. 4. Not based on reason or evidence; unquestioning. 5. Slang. Drunk. 6. independent of human control; *blind fate*. 7.a. Difficult to comprehend or see; illegible. b. Incompletely or illegibly dressed; *blind mail*. c. Hidden from sight: *a blind driveway*.

8. Closed at one end: *a blind passage*. 9. Having no opening: *a blind wall*. 10. Bot. Failing to produce flowers or fruit: *blind bud*. — n. 1. Something, such as a window shade, that hinders vision or shuts out light. 2. A shelter for concealed hunters. 3. Something intended to conceal the true name, esp. of an activity; a subterfuge. — adv. 1.a. Without seeing blindly. b. Without the aid of visual reference: *few blind*. 2. Without forethought or provision; unawares: *entered*.

the scheme blind. 3. Inform intensive: *robbed us blind*.

blindsight 1. To deprive of sight. 2. To deprive of perception.

— blind·ing·ly adv. — blind-

blind alley n. 1. An alley or f

2. A mistaken, unproductive

blind date n. 1. A social enga-

have not previously met, usi-

2. Either of the persons

blind·er (blín'där) n. 1. bli-

tached to a horse's bridle to

that serves to obscure clear

blind·fish (blind'fish') n., p-

various small fishes with ri-

inhabiting cave waters and :

blind·fold (blind'föld') tr.v.

cover the eyes of with or as

from seeing and esp. from co-

to cover the eyes. 2. Somet-

perception. [*< ME blindföld* blind, cover the eyes < OE

blind + *földian*, to strike do-

blind gut n. 1. A digestive c

2. See cecum 2.

blind·man's buff (blind'män

a blindfolded player tries to

other players. [buff, short fc

blindman's buff n. Games. 1.

blind pig n. Pacific Northwest

blind side n. 1. The side on

obstructed. 2. The side awa-

blind side or blind side (bli-

sides. 1. To hit or attack c

atch or take unawares, esp.

blind spot n. 1. Anat. The sit-

from the eyeball. 2. A part c

observed under existing circi-

dia reception is weak or n

which one is markedly igno-

blind staggers pl.n. (used wi-

blind tiger n. Chiefly Southern

alcoholic beverages are sold i

regionally blind pig. [After th

small curiosities in speakeasies

blind trust n. An arra

public official, delegates the

assets to a trustee and agree

status so as to avoid conflict

blind·worm (blind'wurm') n.

eyes.]

blink (blíngk) v. blinked, blink

and open one or both of the

half-closed eyes, as in a bright

intermittent gleams; flash or

dismayed. S. To look with

cause to blink. 2. To hold ba-

3. To refuse to recognize or fi-

mit (a message) with a flash:

instance of rapidly closing a

2. An instant. 3. Scots. A q

4. A flash of light; a twinkle

of the blink. Out of working or

suddenly, var. of *blench*. S

blink·er (blíng'kar) n. 1. Or

blinks in order to convey a r-

1. — tr.v. -ered, -er·ing, -er

blintz (blíntz) also blín·tze (b

filled with cottage cheese, th-

baked. [Yiddish *blintz* < Br

dim. of *blin*, pancake < OR

blip (blíp) n. 1. A spot of lig-

indicating the position of a d-

3. electronic sound; a blip. 3.

— tr.v. blipped, blip·pl

blits (blíts) n. 1. Extreme hap-

salvation; spiritual joy. [ME

blíte, joyfull. See BLITHE.] — b-

blits·ful·ness n.

blits·ter (blíts'är) n. 1.a. A loc-

tions watery fluid and is caus-

similar swelling on a plant,

painted surface. b. A round

— v. -tered, -ter·ing, -ters.

form on. 2. To reprove harsh-

ly in blisters. [ME, prob. <

blits·ter·y adj.

blister beetle n. Any of variou-

capable of blistering the skin

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[4]—Distinguishing Process and Structural Limitations

Certain apparent “process” words in claims are interpreted as structural limitations when they are used in an adjective non-process sense and adequately define a physical characteristic of the product.

“For example, the word ‘frozen,’ though descriptive of the process freezing, definitely describes an objective characteristic observable by inspection of the product. The courts have held a variety of such words not to be process limitations; typical are: ‘intermixed’ as descriptive of a composition of matter, ‘ground in place’ as descriptive of the manner in which spark plug porcelain is fitted into its shell, and ‘pressfitted’ as descriptive of a sheet metal structure.”¹

In re Garnero (1969)² involved a claim which recited “expanded perlite particles which are interbonded one to another by interfusion between the surfaces of the perlite particles while in a pyroplastic state to form a porous perlite panel.” The Court of Customs and Patent Appeals held that “interbonded . . . by interfusion” should be interpreted as a structural rather than a process limitation.³

In *Hazani v. U.S. Int'l Trade Comm'n* (1997),⁴ patent claims to a semiconductor memory cell required that a conductive plate have a surface that was “chemically engraved.” The Federal Circuit held that the claims were “true product” claims, not product-by-process claims as urged by the patentee, and were, therefore properly held to be anticipated by a prior art reference (Kuo).

reasonably appears to be either identical with or only slightly different than the claimed antibody which is produced by the recited process.”; “it is incumbent upon the examiner to advance evidence that the [reference] antibody appears to be identical to or only slightly different than the claimed monoclonal antibody that is produced by the recited process.”).

§ 8.05[4]

¹ Saxe & Levitt, “Product-by-Process Claims and Their Current Status in Chemical Patent Office Practice,” 42 J. Pat. Off. Soc'y 528, 536 (1960).

Cf. *Dennison Mfg. Co. v. Ben Clements & Sons, Inc.*, 467 F. Supp. 391, 203 USPQ 895 (S.D. N.Y. 1979) (“The ‘adapted to be severed externally of an attaching device’ language is a structural limitation, not merely a description of where the severing is to take place.”).

² *In re Garnero*, 412 F.2d 276, 162 USPQ 221 (CCPA 1969).

Cf. *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1570, 219 USPQ 1137, 1140 (Fed. Cir. 1983) (“That a process limitation appears in a claim does not convert it to a product by process claim.”).

³ See also *Vanguard Products Corp. v. Parker Hannifan Corp.*, 234 F.3d 1370, 1372, 57 USPQ2d 1087, 1089-90 (Fed. Cir. 2000), discussed *infra* and at § 18.07[4][b]; *Hazani v. U.S. Int'l Trade Comm'n*, 126 F.3d 1473, 44 USPQ2d 1358 (Fed. Cir. 1997), discussed *infra*; *In re Steppan*, 394 F.2d 1013, 156 USPQ 143 (CCPA 1967) (“Condensation product” is a structural rather than a process limitation); *In re Certain Steel Rod Treating Apparatus*, 215 USPQ 237 (U.S. Int'l Trade Comm'n 1981) (citing Treatise).

⁴ *Hazani v. U.S. Int'l Trade Comm'n*, 126 F.3d 1473, 44 USPQ2d 1358 (Fed. Cir. 1997).

"[The patentee] argues that the 'chemically engraved' claims are product-by-process claims. We agree with the respondents, however, that those claims are best characterized as pure product claims, since the 'chemically engraved' limitation, read in context, describes the product more by its structure than by the process used to obtain it. *See In re Moore*, 439 F.2d 1232, 1236, . . . 169 USPQ 236, 239 (1971); *In re Garnero*, 412 F.2d 276, 278-79, . . . 162 USPQ 221, 223 (1969). As such, the claims are anticipated, because the claimed products are found in the prior art."

"The specification of the . . . patent describes the 'chemically engraved' surfaces as 'textured with asperities' as a result of oxidation. See . . . col. 7, lines 47-51 ('the floating gate 30's surface is oxidized . . . such that mainly the top surface of layer 30 . . . is textured with asperities'). Kuo similarly discloses a conductive plate and states that a surface of the conductive plate adjoining the insulator may be textured with asperities. See Kuo, col. 4, lines 41-43 ('Asperities, or roughness, of the polysilicon-dielectric interfaces are relied upon to decrease the erase voltages to reasonable levels.')."⁵

In *Vanguard Products Corp. v. Parker Hannifan Corp.* (2000),⁶ a patent claim required a thick layer and a thin layer "integral therewith." The patent's

⁵ 126 F.3d at 1479, 44 USPQ2d at 1363.

⁶ *Vanguard Products Corp. v. Parker Hannifan Corp.*, 234 F.3d 1370, 57 USPQ2d 1087 (Fed. Cir. 2000), discussed at § 18.07[4][b].

See also *Stryker Corp. v. Davol Inc.*, 234 F.3d 1252, 1258, 57 USPQ2d 1133, 1138 (Fed. Cir. 2000) (claim term ("locator") is defined by the structure claimed "without imputing functional limitations from the specification into the claims."); *Newell Window Furnishing Inc. v. Springs Window Fashions Division Inc.*, 53 USPQ2d 1302, 1318 (N.D. Ill. 1999) (FOLDED; "The primary issue of claim construction is whether the claims in suit are subject to a process limitation. [An accused infringer] contends that the following italicized language, found in both claims, limits the scope of those claims to devices made by a strip method: '[A] strip of shade material folded lengthwise to form an upper cell wall and a lower cell wall extending from a fold; each upper and lower cell wall having a free edge and a folded edge . . . '"; the patent owners "characterize the italicized language as a structural definition rather than a process limitation and contend that the claims extend to any cell described in the claims, regardless of the method of manufacture."); PAST PARTICIPLE OR ADJECTIVE? "This question derives from an ambiguity in the word 'folded.' [The accused infringer's] interpretation would read 'folded' as a past participle, requiring that at some stage of manufacture a strip of shade material be folded to create one free edge and one folded edge. [The patent owners] would read 'folded' as an adjective, requiring merely that the final product contain a strip of material with a fold in it."; "Placed in context, [the accused infringer's] reading would find an anomalous process limitation among unambiguous product claims. This reading of the italicized language strains the language of the claim well beyond its most natural meaning."); *R2 Medical Systems, Inc. v. Katecho, Inc.*, 931 F. Supp. 1397, 1425-26 (N.D. Ill. 1996) (citing Treatise; in a claim requiring that one element be "affixed" to another, "affixed" means 'to be attached physically.' . . . The terms of the claims do not indicate that 'affixed' refers to a process by which the stannous chloride is bound to the conductive plate, but only that it refers to the result of that process. *See CVI/Beta Ventures, Inc. v. Custom Optical Frames, Inc.*, 893 F. Supp. 508, 519 (D. Md. 1995) (limitation that element be in 'work-hardened

specification taught a "co-extrusion" method for forming a composition of two materials, which entailed forcing the materials through dies. The court held that the claim was not limited to limited to co-extrusion. It noted that (1) "[t]he [patent's] specification shows that the term was used to describe the product, and not as a designation of a specific manufacturing process.;" (2) "the word 'integral' describes the relationship between the elastomeric layers, not the means of joining them. This word did not limit the claim to the manufacturing process set forth in the specification.;" and (3) "review of the prosecution history shows that during examination the examiner as well as the applicant treated the product claims as directed to the product itself, and examined the application accordingly."⁷

pseudoelastic metallurgic state' speaks to the structure, not the process, of manufacture). The asserted claims are all product claims, specifically apparatus claims, and not method or process claims.;" "Even where terms are amenable to interpretation as a procedure of manufacture, apparent 'process' terms should be interpreted as structural limitations when used in an adjective non-process sense and define a physical characteristic of the apparatus.;" "Describing this best mode will often require the applicant to include a description of a preferred process for manufacturing the claimed apparatus. But this does not transform a structural limitation into a process limitation.").

Cf. *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 39 USPQ2d 1783 (Fed. Cir. 1996).

⁷ 234 F.3d at 1372, 57 USPQ2d at 1089-90.

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